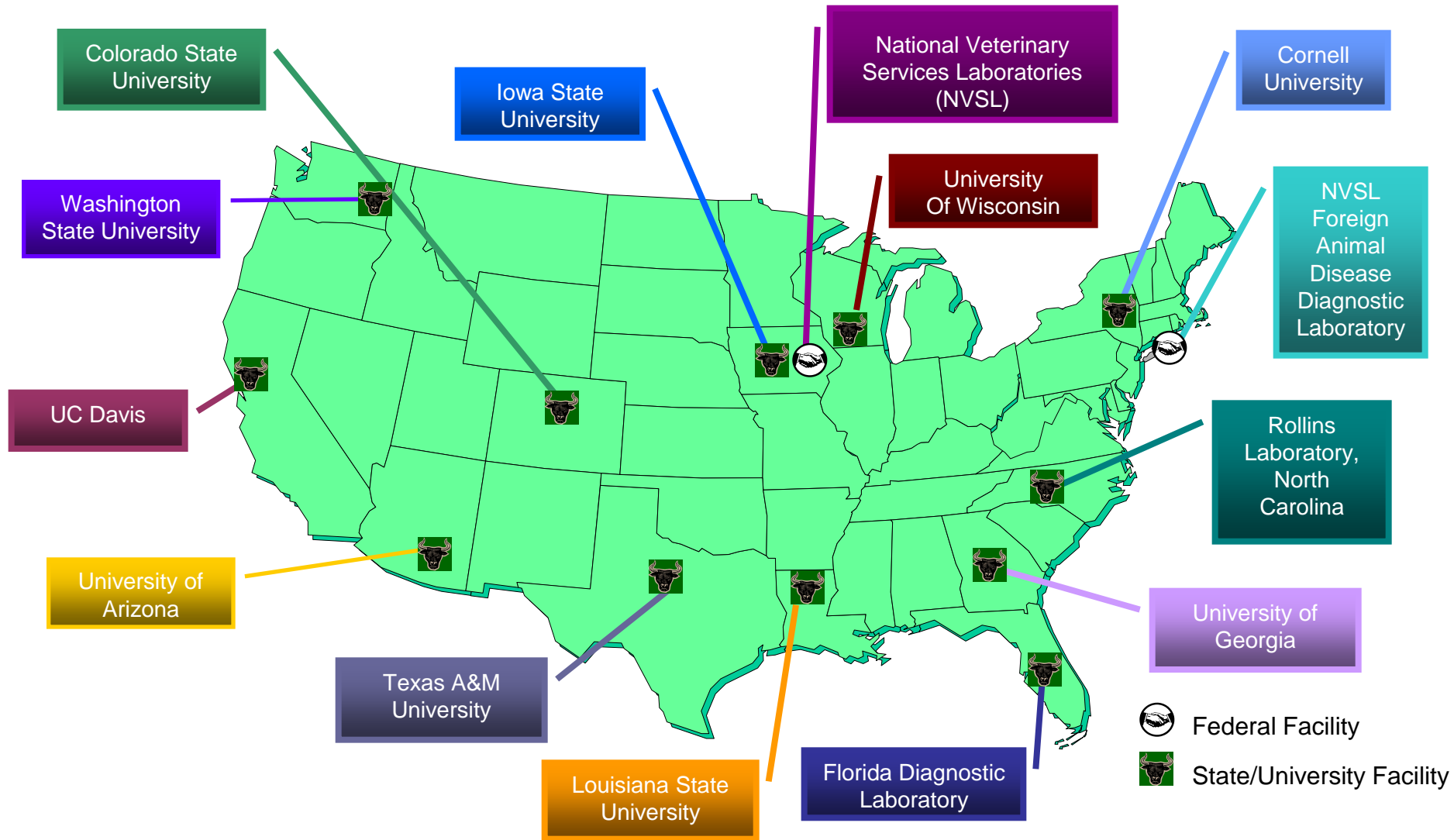


NAHLN Founding Principles



NAHLN- A State and Federal Partnership to Safeguard Animal Health

National Animal Health Laboratory Network-2002



National Animal Health Laboratory Network

- Partnership
 - USDA
 - Animal and Plant Health Inspection Service
 - National Institute of Food and Agriculture
 - AAVLD
 - NAHLN laboratories
- Purpose
 - Early detection
 - Targeted surveillance based on population density & risk
 - Rapid response
 - Surge capacity to test outbreak samples
 - Appropriate recovery
 - Large numbers of samples tested to show freedom



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Founding Principles and Features of NAHLN

- Standardized, rapid diagnostic techniques
- Trained personnel, modern equipment
- Quality standards, proficiency testing
- Secure electronic communications & reporting
- Adequate facility biosafety/biosecurity levels
- Scenario testing
- Laboratory review and approval process



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Standardized, Rapid Diagnostic Techniques

- Deployment of validated assays
 - Real time PCR
 - AI
 - END
 - CSF
 - FMD
 - SIV
 - ELISA
 - BSE
 - PRV
 - IHC
 - CWD
 - Scrapie
 - VI
 - SIV



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Standardized, Rapid Diagnostic Techniques

- Established NAHLN Methods Technical Working Group
 - Provide input on methods validation and approval
 - Review of available methods and associated gaps
 - Identification of potential new technologies
 - Determine equivalency of modified methods or platforms
 - Continual performance assessment of assays
 - Development of performance characteristic summary documents
- Dossier review and assay approval processes



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- Train the Trainer
 - 2011
 - International Quality Management System Training
 - 2010
 - Web Based modules
 - Quality Management System Training
 - 2009
 - Formalize processes
 - ICLN training working group
 - 2008
 - High Throughput System Training
 - 2007
 - Increase personnel trained and PT'd to ≈200
 - 2006
 - Incorporated AI & END
 - Cross training for PCR accepted across diseases
 - Interlaboratory Training
 - 2005
 - Increased the number of trained labs from 12 to 28 & personnel from 24 ≈ 100



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Proficiency Testing

- AI
- ASF
- BSE
- CSF
- CWD
- END
- FMD
- PRV
- Rinderpest
- Scrapie
- SIV
- VSV



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Secure electronic communications & reporting

- Established a system with data and messaging standards to ensure accurate and consistent diagnostic information is quickly and securely transmitted.
 - LOINC and HL7
- Increased emphasis on electronic results messaging
 - CSF productive system - Active
 - AI production system – Spring 2009



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Adequate facility biosafety/biosecurity levels

Modeling to Determine Diagnostic Capacity

- Data used
 - Current laboratory information
 - Location
 - BSL-2 and BSL-3 space
 - Trained personnel
 - Equipment
 - Animal populations
 - Risk
- Other uses for model
 - Prioritization need for new/remodeled laboratory space
 - Assistance development of policy concerning where samples will be tested
 - Contingency plan for response with existing capacity
 - Determine reagent and supply needs in an outbreak



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Scenario Testing



NAHLN Exercises and Drills Working Group formed in September 2007

HPAI Tabletops

- 38 Regional presentation in 2008
- 700 Participants
 - Animal Health
 - Public Health
- Individual after action reports
- Meta analysis
 - Finalized report
 - Prioritized actions to address gaps
 - Working groups

FMD Tabletops

- Policy meeting
- Policy exercise
 - May 2010
- 15 Additional exercises
 - Summer 2010
- NVSL exercise
- Follow up Policy exercise
- Individual after action reports
- Meta analysis



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Laboratory review & approval process



Revisions to NAHLN checklist:

- NAHLN review
- Revisions to VS Memo 580.4

2010

- Clarified documents based on feedback from NAHLN Laboratories
- Provided updated documents to NAHLN Laboratories
- Completed documents provided to NAHLN Program Office
- Supporting materials
 - Accredited laboratories
 - Accreditation certificate
 - Non-accredited laboratories
 - Quality Manual
 - Organizational Chart
 - System SOPs
- Development of associated site visit documents
 - NAHLN Site Visit SOP
 - Guidance documents



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AI Wildbird Surveillance

- 45 laboratories participating
- Conducting surveillance for Wildlife Services
 - Real time PCR
- Inter and intra-agency coordination, communication and training



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CSF Surveillance

- Plan developed by National Surveillance Unit with stakeholder input
 - Target clinical signs, feral swine, slaughter condemned
 - All high risk states involved
- Implemented – January 2006
 - >30,600 samples tested
 - 40 laboratories participating
- From October 2009 – September 2010, tested 3,756 VDL and 2,946 slaughter specimens
- Data submission
 - Web based and electronic messaging



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Successes of the NAHLN

- Strategically combines the infrastructure and expertise in the state veterinary diagnostic laboratories and the National Veterinary Services Laboratories.
- Established the animal health laboratory backbone of the United States emergency response and recovery program.
- Implemented national, standardized surveillance for high priority diseases.



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Conclusions

- From 12 to 56 State/University veterinary diagnostic laboratories
- Surveillance for foreign animal diseases in State facilities
- Increased levels of coordination and collaboration
- Much remains to be accomplished
 - Increased infrastructure support needed
 - Strategic planning and growth
- Partnerships are key to the success of NAHLN!



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NAHLN INFORMATION

- Brochure and Information Cards
- Posters
- Website:
http://www.aphis.usda.gov/animal_health/nahln
- Contact information:

E-mail: nahln@aphis.usda.gov

Telephone: 515-337-7731



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